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Assessment of Federal and State Enforcement Efforts to Control Air Pollution from Stationary Sources

Comptroller General of the United States, Washington, D C

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The General Accounting Office (GAO) made this review because prior audits of air pollution control programs indicated that enforcement of air pollution control laws and regulations was lacking. GAO assessed federal and state enforcement in seven States--Florida, Georgia, Indiana, Massachusetts, New Jersey, North Carolina, and West Virginia. State and local governments have been primarily responsible for abating and controlling air pollution from stationary sources, such as industrial smoke stacks and municipal incinerators. Generally the Federal Government has acted only when the States fai; to act or request assistance.

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REPORT TO THE CONGRESS

Assessment Of Federal And State Enforcement Efforts To Control Air Pollution From Stationary Sources B-166506

Environmental Protection Agency

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-166506

To the President of the Senate and the
Speaker of the House of Representatives

This report is our assessment of Federal and State enforcement efforts to control air pollution from stationary sources.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Director, Office of Management and Budget; the Chairman, Council on Environmental Quality; and the Acting Administrator of the Environmental Protection Agency.

Elmer B. Staats

Comptroller General
of the United States

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ABBREVIATIONS

EPA	Environmental Protection Agency
GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

ASSESSMENT OF FEDERAL AND STATE ENFORCEMENT EFFORTS TO CONTROL AIR POLLUTION FROM STATIONARY SOURCES
Environmental Protection Agency
B-166506

D I G E S T

WHY THE REVIEW WAS MADE

GAO made this review because prior audits of air pollution control programs indicated that enforcement of air pollution control laws and regulations was lacking. GAO assessed Federal and State enforcement in seven States--Florida, Georgia, Indiana, Massachusetts, New Jersey, North Carolina, and West Virginia.

State and local governments have been primarily responsible for abating and controlling air pollution from stationary sources, such as industrial smoke stacks and municipal incinerators. Generally the Federal Government has acted only when the States fail to act or request assistance.

FINDINGS AND CONCLUSIONS

The Environmental Protection Agency (EPA)[1] and the seven States generally relied heavily on voluntary compliance with laws and regulations for controlling air pollution from stationary sources.

State enforcement

Before the mid-1960s air pollution control programs in the seven States emphasized studying the effects of air pollution rather than enforcing control regulations. Many early attempts at enforcement involved negotiations between State agencies and polluters whereby agencies relied heavily on persuading polluters to voluntarily comply with regulations. Many polluters did not comply and, in some cases, were openly defiant of State authority.

Beginning in the mid-1960s the seven States improved their enforcement programs. However, they continued to rely heavily on voluntary compliance and appeared reluctant to take enforcement action.

Several additional factors contributed to the limited effectiveness of State air pollution control programs, including

--incomplete data on emissions of pollutants,

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[1]EPA was established on December 2, 1970, in accordance with Reorganization Plan No. 3 of 1970. Before that date the air pollution control program was administered by the Department of Health, Education, and Welfare.

--inadequate State regulations,

--insufficient money and staff, and

--inadequate surveillance by air pollution control agencies. (See pp. 7 to 22.)

Federal enforcement

A 1963 statute established the Federal role in the enforcement of air pollution control laws and regulations. The statute authorized the Federal Government to act when air pollution from one State endangered the health and welfare of persons in another or when requested by State officials. Enforcement involved three steps:

--A conference of Federal, State, and local air pollution control officials to discuss air pollution problems and recommend corrective action.

--A hearing involving Federal, State, and local officials if a polluter did not take action recommended by the conference.

--Court action, as a final resort, if a polluter did not make reasonable efforts to abate pollution.

Under the 1963 law, the Federal Government has held 11 conferences and taken 1 court action--a case that took many years to resolve. As of January 1973, polluters named in 4 of the 11 conferences had abated pollution in accordance with conference recommendations and, according to EPA, polluters named in the other conferences have significantly abated emissions.

Enforcement under the 1963 law, however, has proven time-consuming and cumbersome. (See pp. 23 to 28.)

The Air Quality Act of 1967 established the regional approach to air pollution control. The Federal Government was to designate air quality control regions and the States were to establish, subject to Federal approval, air quality standards and plans for meeting these standards. Polluters not following the plans were to be subject to Federal and State enforcement actions.

Unfortunately, the regional approach never got off the ground under the 1967 act.

Between 1967 and December 1970, when the Clean Air Amendments were passed, EPA incurred delays in designating the air quality control regions and in issuing information to the States on air quality criteria and pollution control techniques. In addition, some States did not submit plans to EPA as required, and the plans that were submitted contained deficiencies that precluded EPA from approving them. (See pp. 29 to 32.)

With the enactment of the Clean Air Amendments of 1970, the 1967 regional concept was extended and modified, and both the Federal and State Governments improved their air pollution control programs.

EPA has established air quality regions for the Nation, and the States have submitted implementation plans to EPA. As of January 1973, one Federal court action had been taken under the 1970 act. (See pp. 32 to 34.)

It is now up to the States to fully implement plans to control air pollution and to enforce compliance vigorously when polluters do not meet clean-air requirements. It is up to

the Federal Government to enforce the law when the States fail to act. Both levels of Government, however, have been reluctant to enforce air pollution control laws and regulations. (See pp. 35 and 36.)

RECOMMENDATIONS

Because many polluters do not voluntarily comply with air pollution control laws and regulations, the administrator of EPA should

--closely monitor the States' implementation of their plans to determine whether the States are taking adequate enforcement action against polluters not complying with the plans and

--take appropriate enforcement action when the States fail to act.

AGENCY ACTIONS AND UNRESOLVED ISSUES

EPA generally agreed that the States had not effectively enforced air pollution control laws and regulations but stated that local air pollution control agencies had. EPA stated also that it had begun to implement national standards and major enforcement actions.

GAO has appropriately considered comments from the seven States' air pollution control agencies in preparing this report. (See pp. 36 and 37.)

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report is part of GAO's continuing effort to keep the Congress informed of the administration of Federal programs for improving the quality of the environment.

The air pollution control legislation was to expire on June 30, 1973, but has been extended to June 30, 1974, to allow the Congress time to consider new air pollution control legislation. This report should be useful to the Congress during its deliberations.

CHAPTER 1

INTRODUCTION

State and local governments are primarily responsible for preventing and controlling air pollution at its source. The Federal Government is to take action at States' requests or when they fail to act.

Before December 1970 the Department of Health, Education, and Welfare (HEW) was responsible for the Federal air pollution control program. In December 1970 the functions of HEW's National Air Pollution Control Administration were transferred to the Environmental Protection Agency (EPA) which was established in accordance with Reorganization Plan No. 3 of 1970 for organizing the Federal Government's environmentally related activities rationally and systematically.

The first Federal legislation for controlling air pollution was entitled "An Act to Provide Research and Technical Assistance Relating to Air Pollution Control," enacted in 1955 (69 Stat. 322), but it was not until the Clean Air Act of 1963 (77 Stat. 392) that the Federal Government was authorized to act against polluters. The act provided for a three-step enforcement process which included

--a conference between Federal, State, and local air pollution control officials to identify the sources of pollution and to decide on required corrective actions,

--a public hearing called by the Secretary of HEW (now called by the Administrator of EPA) to receive evidence in cases in which corrective action had not been taken, and

--as a last resort, Federal court action against a polluter not making reasonable efforts to abate pollution.

The Air Quality Act of 1967 (81 Stat. 485), which amended the Clean Air Act of 1963, established the regional approach for reducing air pollution. The Secretary of HEW was required to (1) designate those geographical regions in

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the country where air pollution was a problem, (2) publish air quality criteria for those pollutants that may be harmful to health or welfare, and (3) publish information on the techniques which could be used to control the sources of those pollutants. The States were required to develop standards for the pollutants covered by the criteria and plans for implementing the standards. The plans were subject to Federal review and approval.

The Federal Government's enforcement role was expanded significantly by the Clean Air Amendments of 1970 (84 Stat. 1676), which required the Administrator, EPA, to establish

--national ambient air quality standards,

--performance standards for new sources of air pollution, and

--national standards for hazardous emissions.

The act requires the States to adopt plans for implementing, maintaining, and enforcing national ambient air quality standards for each air quality control region. The plans are to include emission limitations, schedules, and timetables for complying with Federal standards. Appendix II discusses the development of the seven States' air pollution control enforcement programs.

CHAPTER 2

STATE ENFORCEMENT PROGRAMS

The States and local governments have been primarily responsible for abating and controlling air pollution at its source. To fulfill this responsibility, a timely and effective enforcement program is needed because many polluters do not voluntarily comply with State and local requirements.

As far back as the 19th century, some States and cities have been aware of air pollution problems and of the need for controlling them. In 1869 Massachusetts established legislative authority for controlling air pollution in the State. In 1881 Chicago and Cincinnati enacted smoke-control laws, and by 1912, 23 of the 28 American cities with populations exceeding 200,000 had enacted similar laws. Most States, however, did not establish air pollution control programs or enact air pollution legislation until the mid-1960s. By 1965, 35 States had some sort of air pollution control program many of which were very limited.

Our review in Florida, Georgia, Indiana, Massachusetts, New Jersey, North Carolina, and West Virginia showed that, before the mid-1960s, air pollution control programs were frequently conducted by State health agencies which emphasized studying the effects of air pollution more than enforcing air pollution regulations. Much of the early enforcement effort involved negotiations with polluters, in which the State agencies relied heavily on persuasion to obtain voluntary compliance. Many polluters, however, did not comply with State requirements and, in some cases, were openly defiant. As a result, the States were generally not successful in enforcing air pollution regulations.

Beginning in the mid-1960s, however, the seven States substantially improved their enforcement programs. Various States created new agencies to deal specifically with air pollution, enacted stronger enforcement legislation, adopted pollution emission standards, and established more stringent air pollution control regulations.

Although the State enforcement programs had improved, the States continued to rely heavily on voluntary compliance and appeared reluctant to act. In general, the States' enforcement programs were not effective in abating air pollution.

Before the Clean Air Amendments were enacted in 1970, several additional factors had limited the effectiveness of State air pollution control enforcement programs. These factors included

--the lack of complete inventories of emissions from sources of air pollution,

--inadequate State air pollution control regulations,

--insufficient funds and staff, and

--inadequate surveillance of air polluters by control agencies.

LIMITED USE OF STATE ENFORCEMENT TOOLS

The seven States included in our review had several enforcement tools available for obtaining polluters' compliance with State air pollution requirements. These tools, which varied among the States, included abatement orders, compliance schedules, hearings, court actions, and permit programs. The seven States, however, did not fully use these tools but relied heavily on voluntary compliance instead. Many polluters failed to comply voluntarily, and few enforcement actions were taken against them.

Abatement orders, compliance schedules, hearings, and court actions

Most of the seven States held hearings with polluters and interested parties to establish acceptable plans for complying with State regulations. The hearings generally resulted in States' issuing abatement orders or establishing compliance schedules. Abatement orders (also referred to as administrative or consent orders) specified the type and place of the violation and the date it must be corrected. Some States issued temporary orders specifying dates by which the polluters were to meet with State or local officials to discuss the violations and the corrective actions needed. After the meetings they issued final orders.

Compliance schedules, like most abatement orders, set target dates for polluters to abate emissions. When polluters failed to comply--which occurred frequently--with the

orders or schedules, the States could initiate court actions against them to obtain compliance and/or assess fines.

In many cases, however, it was difficult for States to obtain compliance promptly. For example, as of June 30, 1972, the Florida air pollution control agency had issued abatement orders to 82 sources of air pollution, primarily for excessive smoke and dust emissions. At that time, 49 of the 82 sources had satisfactorily abated pollution, and 33 had not complied with the State orders. Enforcement actions against the 33 sources had been pending for an average of 10-1/2 months; 1 case had been pending for 55 months. As of December 31, 1972, 30 of the 33 sources had still not complied.

Indiana relied primarily on voluntary compliance by polluters. In establishing compliance schedules, Indiana sent approximately 2,400 letters to industries in 1969 advising them of the State's emission regulations and emphasizing that, if their emissions violated the regulations, they had to submit timetables for compliance before the end of the year.

The director of the State agency estimated that, as of November 1972, only 94 of the 2,400 industries had replied. The director said that no followup had been performed on these letters and even though some additional replies may have been received, he could not confirm the number because they had not been recorded in a compliance schedule ledger.

We visited the two power plants in Indiana which the State said were the largest sources of emissions to determine whether the plants had abated their emissions. (Power plants are major sources of sulfur dioxide and particulate emissions.)

As of November 1972 neither plant had complied with the State's emissions regulations for particulates and sulfur dioxide. One plant, the Indiana and Michigan Electric Company, had proposed to comply with the regulation for particulate emissions in 1975. The State agency did not accept the proposal because it had requested the plant to comply with the particulate regulations by July 1973 and with the sulfur dioxide regulations by January 1975. According to the agency director, the plant had not submitted an acceptable compliance schedule, and, as of November 1972, no

further enforcement action had been initiated against it. In May 1973, an official of the plant agreed that the above situation existed in November 1972. He said that on May 22, 1973, the State approved the plant's program for controlling particulate emissions, but the program will not be completed until 1975.

The second plant, Indiana-Kentucky Electric Company, had requested financial assistance from the Federal Government to demonstrate a new method for controlling sulfur dioxide emissions. As of November 1972 the plant was not listed on the State's compliance schedule, and the State had taken no legal action to enforce regulations. On May 23, 1973, an official of the plant confirmed the above information and stated further that the plant and the State did not have an agreement for controlling sulfur dioxide emissions.

Of the seven States included in our review, New Jersey most vigorously enforced its air pollution laws and regulations. From 1968 through April 1971, New Jersey recorded 2,905 violations of its regulations and collected 632 fines totaling $271,375. Between May 1971 and September 30, 1972, New Jersey issued 1,627 orders to polluters who violated the State's air pollution control regulations. From April 1971 to November 1972, the State had collected an additional 535 fines totaling $694,200.

The following examples illustrate the manner in which some of the States used administrative orders, hearings, and court actions to obtain compliance with air pollution control regulations. The examples also illustrate the lengthy delays States frequently encountered in obtaining compliance.

Example 1

In September 1967 the Fulton County, Georgia, Air Pollution Control Agency requested Atlanta to abate air pollution from two municipal incinerators. Daily ambient air-sample data collected by the county agency for areas surrounding the incinerators and independent samples of the smokestack emissions obtained by the State control agency from 1967 to February 1971 disclosed that the two incinerators continued to violate both State and county emission standards by as much as 246 percent. During 1967 to 1971, the State and county air pollution control agencies wrote

letters, made telephone calls, and had several meetings with city officials to persuade them to abate the emissions.

In February 1971 the State agency issued an order to the city which stated that if a plan of corrective action was not submitted by April 1971, legal action would be taken. In March 1971, the State agency told the city that if its plan of corrective action was not submitted by April 10, 1971, the State would consider taking action to close the incinerators. In April 1971 the mayor submitted a formal schedule for abating air pollution from the incinerators. In this case, about 3-1/2 years had passed before the city submitted a schedule for abating pollution from its incinerators.

The city closed one of the incinerators on March 3, 1972, but was unable to meet the scheduled date of November 1972 for controlling emissions from the other incinerator.

In May 1973 a city official reviewed the above statements. He said that with the approval of the State air pollution control agency, the city plans to spend about $1.5 million on a shredder and baler to process refuse for landfill disposal and to discontinue operating the incinerator by March 1974.

Example 2

The Revell Crate Company, a Florida manufacturer of wirebound crates, emitted large quantities of particulate-laden smoke from its open burning of wood wastes. Residents and officials of a nearby town filed numerous complaints with the county board of health. In February 1966 the county referred the case to the State Department of Health.

In April the department of health inspected the manufacturer's plant and recommended that the city issue a citation requiring compliance with smoke regulations within 90 days. The city did not act and referred the case back to the department. In September 1966 the department notified the manufacturer that burning waste wood did not comply with State regulations and requested the manufacturer to submit plans for abatement within 30 days. In October 1966 the manufacturer said that equipment was being fabricated or purchased to use the waste and that the equipment would be operational within 2 months.

By May 1967 the manufacturer had made little progress, and the department of health requested it to cease all open burning. The manufacturer did not comply, and in July the department requested the State attorney general to take legal action. The attorney general, however, informed the department that the courtroom workload prevented immediate action. In February 1969 the Florida Air and Water Pollution Control Commission, which was created in September 1967, observed continued emissions of smoke from the manufacturer's plant and recommended that the attorney general issue a citation to the manufacturer.

In May 1969, the State issued a notice and order citing the manufacturer for violating State regulations. The manufacturer immediately requested a public hearing. The public hearing was held in September 1969, at which time, the commission decided to delay further actions until tests were completed on a new burner that the manufacturer proposed to obtain. In November 1969, the commission issued an order to the manufacturer which stated that charges would be dismissed if tests showed that emissions from the burner complied with State requirements. The burner tests were acceptable, and a construction permit was issued in March 1970 for installing the burner.

In November 1970, the commission observed that smoke emissions from the manufacturer's plant during startup exceeded State requirements. The State found that the startup procedures were not adequate to abate smoke emissions.

On October 1, 1972, the case was transferred from the State agency's Bureau of Enforcement to the legal section for court action. In November 1972, after more than 6 years of effort, the case was returned to the bureau with a request that a new study be initiated. As of May 1973 the company was operating under an abatement schedule established as the result of a public hearing held in April 1973. This schedule requires that smoke emissions from the plant comply with the State's air pollution control regulations by July 1, 1974.

In May 1973 the President of the Revell Crate Company stated that our report of events between his company and the Florida State and local agencies was fairly stated.

Permit programs

In conducting their air pollution control programs, the seven States used permit programs, whereby State permission was required to construct or operate a facility that contributed to air pollution. A permit program can be a useful enforcement tool if it controls not only existing sources of air pollution but new sources as well.

Of the seven States, only North Carolina and Florida had permit programs that applied to both new and existing sources of air pollution; and only Georgia and New Jersey had adequate systems for routinely identifying new sources of air pollution which would be subject to the permit program.

Those States with permit programs for new sources generally used two types of permits--one to construct and one to operate a facility. To obtain either permit, an applicant was required to provide evidence satisfactory to the State air pollution control agency that emissions would comply with State regulations.

The construction permit was to insure that new sources of pollution were not constructed and that existing sources were not modified without evidence satisfactory to the State air pollution control agency that emissions would comply with State regulations.

After a facility had been constructed, it could operate for an interim period, usually 30 days, before an operating permit was required. Operating permits were issued for both definite and indefinite periods, but in each case the permits were subject to review and could be revoked for violating State regulations. In addition, some States issued temporary permits to polluters which allowed them to continue operating while they took action to reduce emissions. For example, North Carolina had identified an estimated 3,500 potential black-smoke and open-burning sources. Agency personnel estimated in November 1972 that 950 of the sources had been issued temporary permits, 256 had been issued operating permits, 1,800 were still under consideration, and the remaining 494 complied with State regulations.

State agencies sometimes found that polluters could not comply with applicable regulations because of conditions beyond the polluters' control or because of special circumstances or physical conditions which rendered strict compliance unreasonable, unduly burdensome, or impractical. In these instances, State agencies generally granted variances (permits to continue to pollute) to the polluters.

For example, in March 1968, the Picatinny Arsenal in New Jersey was cited by the State air pollution control agency for violating the State's regulations. On February 25, 1971, the State agency granted the arsenal a variance from the State's regulation on the sulfur content of coal because the arsenal was having difficulty in obtaining low sulfur coal. By November 1972, the arsenal had converted to using fuel oil and only burns coal when its oil supply is exhausted.

The success of a permit program depends to a large extent on the ability to identify sources of air pollution that are subject to the program. In only Georgia and New Jersey did we find an effective system for new source identification. For example, New Jersey's Office of the Secretary of State notified the State air pollution control agency of all firms proposing new construction in the State. The air pollution control agency notified the firms that they must apply for an air pollution control permit and must submit plans and specifications for the agency's review and approval before beginning construction. The agency inspected the facilities after they were built, and if the pollution devices were operating properly, the agency issued operating permits.

The other five States included in our review had little control over identifying polluters subject to their permit programs. For example, Massachusetts relied primarily on field investigators to locate, at random, construction of potential new sources of pollution. Even if a potential new source was located and construction plans were received and approved, the State did not have followup procedures to insure that the facilities were constructed in compliance with the plans.

North Carolina, in identifying new sources of air pollution, relied primarily on the State's registered engineers voluntarily notifying the State of any new construction or changes made to existing fuel combustion units. In November 1972, the State informed us that it was implementing a procedure that placed the responsibility for identifying new sources on local air pollution control agencies.

Indiana had not developed a system (1) for determining that plans and specifications for new construction were submitted to the State or (2) for determining compliance with approved plans. The State's awareness of the construction of new sources was limited to the personal knowledge and observations of individual agency staff members.

FACTORS CONTRIBUTING TO INEFFECTIVE ENFORCEMENT

In addition to the limited use of enforcement tools, the effectiveness of enforcement actions was also hampered by other factors, including (1) inadequate enforcement regulations, (2) incomplete emissions inventories, (3) inadequate surveillance of actual and potential sources of air pollution, and (4) insufficient resources.

During fiscal years 1972 and 1973, the States were taking action to improve their air pollution control programs as a result of the Clean Air Amendments of 1970. This legislation made it necessary for each State to establish a plan for implementing, maintaining, and enforcing national ambient air quality standards.

Enforcement regulations

Since 1967 most of the States have strengthened their enforcement authority by enacting new legislation and/or by issuing additional regulations. In August 1971, an EPA evaluation of the legislative authority of the seven States stated that they had adequate authority to adopt regulations, set emissions standards, or take other measures necessary to attain clean air.

Although the legislative authority may have been adequate, the regulations adopted by some States pursuant to that authority did not adequately provide for carrying out an effective enforcement program against all polluters, because the regulations did not apply to all geographic areas or to emission of certain pollutants.

For example, before March 1972 West Virginia's regulation limiting particulate emissions had applied to only one region in the State. Although there were about 50 power plants (major sources of particulate emissions) in the State, only 11 were subject to the regulation. On March 15, 1972, as a result of the Clean Air Amendments of 1970, the particulate regulations applied throughout the State.

Also, Georgia had established ambient air quality standards for sulfur dioxide, particulate matter, carbon monoxide, total oxidants, and nonmethane hydrocarbons but did not have regulations to control all of these emissions at their source until March 1972.

Incomplete emissions inventories

A State must have adequate knowledge of its air pollution sources and the extent of their emissions before implementing an effective enforcement program. An air pollution emissions inventory should include for all major sources of air pollutants within a specified area the name and location of the source, the type of pollutants[1] emitted, and the volume, frequency, and duration of the emissions. During our review the seven States were compiling emissions inventories. Most of the inventories, however, included only sources of sulfur oxides or particulates. The status of each State's inventory is briefly discussed below.

--Florida had identified approximately 1,400 potential polluters, 95 to 98 percent of the estimated total in the State, but did not have complete information on the types of pollutants or the volume, frequency, and duration of their emissions. In November 1972, EPA officials informed us that it had contracted with a consultant to compile a complete inventory of emission sources in the State but that the contractor had not begun to compile the inventory. In June 1973 the State told us that the inventory had not been completed.

--Georgia had identified most of the potential sources of pollution but did not have data on the type, volume, and frequency of the emissions. EPA contracted with a consultant for compiling a complete inventory of air pollution emissions in Georgia. The State agency's director told us in November 1972 that the inventory was current and that it contained data on 1,700 sources of air pollution.

--Indiana worked with a private consulting firm which was paid by EPA to assist in compiling an emissions

[1]In April 1971 EPA established national ambient air quality standards for six major types of pollutants--particulates, sulfur oxides, nitrogen dioxide, carbon monoxide, hydrocarbons, and photochemical oxidants.

inventory. The inventory was completed and turned over to the State in December 1971, but the inventory contained many errors. In June 1973, an official of the State agency informed us that the State was developing a completely new inventory which should be finalized sometime in 1974.

--Massachusetts' initial emissions inventory included only sources of sulfur dioxide and particulates for three of the State's six air pollution control districts. By November 1972 Massachusetts had expanded the inventory to include sources in all six air pollution control districts. The expanded inventory contained emission data for particulates, sulfur dioxide, nitrogen oxides, carbon monoxide, and hydrocarbons.

--New Jersey's inventory included polluters in only 9 of the State's 21 counties and only sources of sulfur dioxide and particulates. As of November 1972, New Jersey had updated its emissions inventory to include sources of sulfur dioxide, particulates, carbon monoxide, hydrocarbons, and nitrous oxides for all 21 counties in the State.

--North Carolina's emissions inventory, prepared in September 1971, included 938 mineral, agricultural, and chemical air pollution sources and all other sources emitting more than 25 tons of pollutants a year. In January 1973 the State was updating its inventory.

--West Virginia had Statewide emission inventories for various industrial sources, but these inventories included only sources of sulfur oxides and particulates. By November 1972 West Virginia had developed a comprehensive emissions inventory based on information from the Department of Commerce, questionnaires, registration forms, manufacturing directories, trade associations, field estimates, and engineering estimates. The inventory included sources emitting particulates, sulfur oxides, nitrogen oxides, carbon monoxide, and hydrocarbons.

Inadequate surveillance of air polluters

Before a State can act against an air polluter, it must be able to identify the air pollution problem or violation and its source. This can best be done through (1) a combination of ambient air monitors and monitors of specific sources of air pollution, (2) citizen complaints, and (3) field investigations.

Most of the seven States relied on field investigations or citizen complaints. Personnel in the seven States told us that they generally did not have enough surveillance equipment and that the equipment the States did have could not monitor all major air pollutants. For example, as of June 1973, Massachusetts had 54 monitoring stations; only 13 could monitor anything other than sulfur oxides, nitrogen oxides, and particulates.

Insufficient resources

The scope and adequacy of a State pollution control program primarily depend on the amount of resources--money and staff--it has available. Because of insufficient staff some agencies had limited enforcement activities. A lack of money and staff adversely affected their ability to develop evidence for direct enforcement action, identify new sources of pollution, and monitor sources cited for violating air pollution control regulations.

Many State officials told us that they had insufficient personnel and funding to enable them to adequately perform all functions necessary for an effective enforcement program. In addition, the States sometimes had problems in filling authorized positions because of low salaries and limited advancement opportunities. As shown below, the number of employees of the State and local air pollution control agencies on June 30, 1972, was significantly less than that suggested by EPA in its June 1970 Report to the Congress entitled "Manpower and Training Needs for Air Pollution Control."

	State and local staff		Percent of staff employed compared with staff suggested by EPA
	Suggested by EPA	Employed 6-30-72	
Massachusetts	238	73	31
New Jersey	361	243	67
West Virginia	74	42	57
North Carolina	198	145	73
Florida	176	133	76
Georgia	156	65	42
Indiana	284	104	37

A staff's size was related to the extent of its activities. For example, of the seven States, Indiana had one of the lowest percentages of actual staffing compared with that suggested by EPA. Indiana officials told us that in view of their limited resources and a geographic area of approximately 36,000 square miles with a population of about five million people, their program was directed toward answering citizen complaints and requesting voluntary compliance by polluters with State regulations rather than initiating enforcement actions.

In contrast, New Jersey, which had a vigorous enforcement program, had one of the highest percentages of actual staffing.

An August 1972 EPA report included statistics on the man-years of effort expended by State air pollution control agencies during fiscal year 1972 on various activities including enforcement. The report also contained EPA's estimate of the man-years of effort needed by 1975 to carry out a successful air pollution control program. The following table compares the man-years expended for enforcement activities in fiscal year 1972 with EPA's estimates of such needs by 1975.

	Man-years expended in fiscal year 1972	EPA estimate of needs by fiscal year 1975
Florida	(a)	89.4
Georgia	24.3	71.8
Indiana	35.9	74.1
Massachusetts	41.3	105.9
New Jersey	(a)	353.2
North Carolina	28.0	83.2
West Virginia	12.2	21.4

[a]Not available.

- - - -

As required by the Clean Air Amendments of 1970, all 50 States have established plans for implementing, maintaining, and enforcing national ambient air quality standards. The plans include

--emissions limitations,

--compliance schedules,

--procedures for monitoring ambient air quality,

--requirements that owners or operators of stationary sources of air pollution monitor their emissions and report the results to the States; the States are to correlate such reports with the emissions limitations established under the act, and

--assurances from the States that they will have adequate personnel, funding, and authority to carry out the plans.

Violating any provision of the plans is subject to State and Federal enforcement actions.

EPA had fully approved the plans of Florida, Georgia, North Carolina, and West Virginia. By April 1973, EPA had approved parts of the plans of Indiana, Massachusetts, and New Jersey, and these States were revising their plans so they could be fully approved.

Adopting the plans is an important step in controlling air pollution. The States still need to fully implement the plans and take vigorous enforcement action when polluters do not comply with requirements.

CHAPTER 3

FEDERAL ENFORCEMENT PROGRAM

State and local governments have been primarily responsible for enforcing air pollution control laws. The Federal role in enforcement, first established in 1963, is to act when the States fail to act in cases of interstate air pollution or when they request Federal assistance in either interstate or intrastate pollution. Because of the increasing public concern over the problem of air pollution, the Congress has sought to increase the Federal Government's role in abating air pollution.

The Air Quality Act of 1967 established the regional approach to air pollution control. The Federal Government was to designate air quality control regions and the States were to establish, subject to Federal approval, air quality standards and plans for meeting the standards. Polluters not following the plans were to be subject to Federal and State enforcement actions. Unfortunately the regional approach never got off the ground under this act. Between 1967 and December 1970, when the Clean Air Amendments of 1970 were passed, 21 implementation plans of the regional approach had been submitted, and none had been approved.

Under the provisions of the 1963 law the Federal Government has held 11 enforcement conferences and has taken 1 court action. Our review showed, however, that the effectiveness of the enforcement conferences was limited.

LIMITED FEDERAL ENFORCMENT ACTIONS UNDER CLEAN AIR ACT OF 1963

The Clean Air Act of 1963 authorized Federal enforcement actions when air pollution from one State endangered the health and welfare of persons in another State. In addition, the act required the Secretary of HEW (now the Administrator of EPA) to take enforcement action, in cases of interstate or intrastate pollution endangering the health or welfare of persons, when requested by (1) the Governor of a State, (2) a State air pollution control agency, or (3) the governing body of a municipality, if approved by the Governor and the State air pollution control agency.

The enforcement procedure involves three steps:

1. An enforcement conference between Federal, State, and local air pollution control officials to discuss, among other things, (1) the occurrence of air pollution subject to abatement under the act, (2) the adequacy of measures taken to abate the pollution, and (3) the nature of delays, if any, being encountered in abating the pollution. Upon conclusion of the conference, the Secretary may recommend to the State and local agencies that remedial action be taken.

2. A public hearing involving Federal, State, and local agencies if the alleged polluter has not taken the recommended remedial action.

3. As a final resort, court action against a polluter not making reasonable efforts to abate pollution.

The act did not authorize swift enforcement actions to halt the emissions of air pollutants even when the health and welfare of persons were endangered. Under the act, a minimum of 32 weeks was required between the time that EPA notified interested parties of its decision to hold an enforcement conference and the time that EPA could hold a formal hearing if the conference recommendations were not followed.

After the hearing, EPA could issue a notice giving the polluter at least 26 weeks to take corrective action. EPA could refer the case to the attorney general for court action only if the polluter was not taking reasonable action to abate pollution within the time specified.

Since 1963 EPA has held 11 enforcement conferences, of which 6 were requested by State Governors. As of January 1973, after extensive delays, pollution had been abated in accordance with recommendations resulting from four of the conferences; polluters involved in the other seven conferences were either complying with the recommendations or their time for compliance had been extended. One case had been taken to court under the 1963 act.

Although the conference recommendations were to serve as a basis for further enforcement action, such use had been limited. Most of the time, when the conference recommendations were not followed, EPA reconvened the conferences and frequently extended the dates for compliance.

The following examples illustrate the long delays involved in enforcing the act.

Example 1

The Bishop Processing Company, a chicken rendering plant in Bishop, Maryland, began operations in 1955, and immediately the residents of Bishop and nearby Selbyville, Delaware, began complaining to the local authorities about the stench from the plant. In November 1965 EPA convened the Interstate Air Pollution Abatement Conference of Bishop, Maryland, and Selbyville, Delaware, the first conference under the Clean Air Act of 1963. The conferees unanimously recommended that the plant abate its odors by September 1966.

The plant made no significant progress in abating its odors by September 1966, and EPA recommended that a hearing board be set up to deal with the case. The hearing board, convened in May 1967, ordered the plant to eliminate the odors within 6 months. The plant responded with a lawsuit challenging the recommendations of the board and the constitutionality of the 1963 act. The court upheld the authority of EPA to hold such a conference and to require compliance with its recommendations.

In November 1968, after approximately 1 year of negotiation, the plant signed a decree to abate the odors. In February 1969, the plant was still emitting odors, and the Department of Justice requested the court to close the plant. The court ruled that it could not do so because of insufficient evidence. After the State and EPA made more inspections, the court ordered the plant to stop operations by February 1970. The plant appealed and, on March 3, 1970, a higher court upheld the decision of the lower court but stayed the closure order pending the plant's appeal to the Supreme Court. On May 18, 1970, the Supreme Court refused to review the case thereby upholding the closure order. The plant ceased operations.

In April 1971 the State found that the company was processing oils, but not rendering chickens. The Federal court order, however, prohibited any operations at the plant. In July 1971, a Federal District Court held the company in contempt of court and ordered it to implement an EPA-approved abatement program as soon as possible. In November 1972, an EPA official told us that the company had complied with the court order.

Some EPA officials consider this case to be one of the more significant EPA enforcement efforts, although more than 5 years were required to obtain compliance. EPA officials told us that, as a result of this court action, several legal issues concerning the Clean Air Act were resolved. In commenting on this matter in June 1973, the president of the company pointed out that his company had spent a considerable amount of time and money trying to comply with the conference recommendations and the court order.

Example 2

Air pollution problems began in the early 1950s in Marietta, Ohio, and Parkersburg and Vienna, West Virginia. The Union Carbide Corporation's plant in Riverview, Ohio, across from Vienna, West Virginia, was a major source of smoke, dust, and sulfur dioxide. In 1951, Vienna officials appointed a citizens' committee to study the problem. After consultations between the citizens' committee and officials at the plant, a committee of the Bituminous Coal Producers made a study at the plant. The study report recommended that electrostatic dust collectors be installed. The plant installed the recommended equipment in 1954.

Ten years later, in August 1964, West Virginia officials notified the Ohio State Health Department about complaints from Vienna citizens on problems of visibility, soiling, and dustfall, allegedly caused by the plant. Complaints continued to increase with plant production. HEW's Public Health Service conducted a Federal investigation of air pollution in the area during October 1965 to September 1966. The investigators found sulfates, dust, destruction of property and vegetation, foul odors, and an abnormally high incidence of cardiorespiratory diseases. EPA called an enforcement conference in November 1966, but it was not held until March 1967. Officials of the plant chose not to participate in the conference. The conference was concluded in March 1967, but EPA made no formal recommendations because conference participants had substantially different viewpoints.

In October 1969 the conference was reconvened to discuss pollution from the plant and from other industrial polluters in the area. Again officials of the plant chose not to participate. The conference participants showed that, since 1965, particulate emissions in the area increased by 33 percent and

sulfur dioxide emissions by 14 percent. The plant accounted for about 86 percent of all sulfur oxide emissions and about 25 percent of all particulate emissions in the area.

EPA issued the conference findings and recommendations in March 1970. Conference recommendations were amended in April 1970 and provided that:

--The Union Carbide Corporation's plant and other polluters limit particulate emissions to acceptable levels within 36 months.

--The plant reduce its sulfur oxide emissions by 40 percent within 6 months and by 70 percent within 2 years.

--The plant submit by July 20, 1970, a schedule of modifications to be completed by April 20, 1972.

--The plant submit progress reports to the State at 6-month intervals.

On July 16, 1970, the plant submitted a proposal to EPA for controlling particulates and sulfur oxides and requested Federal financial support to implement the proposal. EPA rejected the proposal on October 22, 1970, 2 days after the required date to reduce sulfur oxide emissions.

EPA held a public meeting on November 13, 1970, to consider the adequacy of polluters' abatement actions. According to EPA, all polluters had taken positive steps to abate particulate and odor emissions, but no progress had been made by the plant to control sulfur dioxide emissions. For the first time, however, representatives from the plant participated in an abatement session and promised that they would submit a revised proposal about December 1, 1970.

The plant submitted its revised proposal on December 8, 1970. EPA rejected the proposal on January 8, 1971, because it did not comply with the conference recommendations. The plant submitted another proposal, which EPA accepted on January 18, 1971.

As of April 1972, the plant complied with the conference recommendation for sulfur dioxide. EPA informed us in February 1973 that the plant's abatement program for particulate

matter was proceeding on, or ahead of, schedule. A representative of the plant reviewed this example in June 1973 and confirmed the above statements.

Example 3

The Ohio Edison Company's power plant in Knox Township, Ohio, was a major source of particulate and sulfur oxide emissions affecting New Cumberland, West Virginia.

At the request of the Governor of West Virginia, EPA convened a conference on July 8, 1969. The conference participants concluded that excessive emissions from the plant were endangering the health and welfare of citizens in New Cumberland. On August 22, 1969, the conference participants recommended that the power plant control its emissions by December 1970.

In February 1970 representatives of the power plant notified EPA that it might be as long as December 31, 1971, before the pollution could be abated. On June 29, 1970, EPA notified the plant that abatement by the December 1971 date was unacceptable and that a public hearing would be called if the plant did not notify EPA of its intent to abate the pollution earlier. On August 7, 1970, the company repeated its proposal to abate pollution by December 1971 and pointed out that enforcement under the Clean Air Act would take a minimum of 7 months, assuming that the court ruled in EPA's favor and without allowing for appeal of the court's decision. The company questioned whether it or EPA should spend the time, money, and effort on enforcement proceedings because the company intended to abate pollution within 13 to 16 months.

On September 1, 1970, EPA accepted the plant's proposal and on September 30, 1971, the plant had permanently retired eight boilers which were a major source of the pollution problem. In November 1972, EPA advised us that, although a noticeable improvement in air quality had occurred in the vicinity of the plant, its particulate emissions were slightly above the recommended level, apparently because of a lower quality of fuel burned and/or the condition of the boilers. EPA stated that these emissions must be reduced to comply with stringent State regulations.

The company reviewed our findings in this case in June 1973, and its comments have been considered in the report.

LACK OF ENFORCEMENT UNDER THE AIR QUALITY ACT OF 1967

The Air Quality Act of 1967 which amended the Clean Air Act provided for abating, preventing, and controlling air pollution on a regional basis. Under the act, the Secretary of HEW (now the Administrator of EPA) was required to (1) designate those regions in the country where air pollution was a problem, (2) publish air quality criteria for those pollutants that may be harmful to health or welfare, and (3) publish related information on the techniques which could be used to control the sources of those pollutants. The States were required to develop standards for the pollutants covered by the criteria and to develop plans for implementing the standards in the regions designated by the Secretary. The plans were subject to Federal review and approval.

In enacting the 1967 act the Congress specifically directed that, during the time the regional program was being implemented, EPA was to use existing procedures to continue its enforcement activities.

EPA, however, deemphasized its enforcement program and assigned to the enforcement staff the job of implementing the regional program. The staff of the EPA Field Operations Branch, which had been responsible for all direct enforcement, was reduced from 160 to 43 in 1968. By the end of 1970, this staff had been reduced to three. Most of the staff members were to assist the States in developing air pollution control agencies to carry out the regional program.

An EPA official told us that the agency interpreted the intent of the Congress as primarily emphasizing establishment of the regional program. He said that, because EPA lacked adequate staff to implement the regional program and conduct an effective enforcement program concurrently, a shift to just implementing the regional program would, in EPA's opinion, use EPA's limited resources and manpower more effectively.

In December 1970, when the Clean Air Amendments of 1970 were passed, however, the regional program had not been implemented and therefore could not be used as a basis for taking enforcement action. EPA incurred delays in designating air quality control regions and in issuing to the States information on air quality criteria and pollution control

techniques. EPA officials attributed the delays to the limited number of staff assigned to these tasks. In addition, several States did not submit implementation plans to EPA as required, and the plans that were submitted in many cases contained deficiencies that precluded EPA from approving them.

Delays in implementing the regional program

Under the 1967 act, the Federal Government was required to designate, to the extent possible, within 18 months of enactment, air quality control regions throughout the Nation. The regional designations were to be based on jurisdictional boundaries, urban industrial concentrations, atmospheric areas, and other factors which affect air pollution.

EPA's establishment of the air quality control regions involved public notices, meetings with State and local officials, and evaluations of engineering and urban factors which included identifying the extent, location, and type of pollution. Despite the complexity and importance of this process, an EPA official said that only five men had been assigned to the designation task. This official explained that the designations were not made on schedule because of insufficient staff and because EPA had little knowledge of the existence or extent of air pollution for many areas of the Nation.

As of June 1969, 18 months after the act was passed, only 13 of an eventual 247 regions had been designated. Many major urban industrial areas had not been designated, including Detroit; Kansas City, Missouri; Baltimore; Indianapolis; Minneapolis; and Birmingham, Alabama. (Birmingham, in April 1971, received national publicity because of its high levels of air pollution.)

A total of 32 regions had been designated by April 24, 1970. President Nixon, in his Environmental Message to the Congress in February 1970, reported an acceleration in designating regions. To do this, an EPA official said, the designations were made on the basis of population concentrations and agreements with the States on areas to be included in the regions.

In addition to requiring the designation of air quality control regions, the 1967 act, as well as the 1963 act, required EPA to issue criteria guidelines to the States on (1) the effects of pollutants on health and welfare and (2) control techniques to reduce pollution. States were then to develop ambient air quality standards and plans for implementing them. If EPA approved the standards and plans, the States were to control pollution in that manner.

In February 1969 the first guidelines on air quality criteria and control techniques were issued. These guidelines were for sulfur oxides and particulates. According to an EPA official, 6 years were required to issue these guidelines because of the limited number of staff assigned to the task and the lengthy review process to which the draft guidelines were subjected. For example, the draft guidelines for particulates developed by EPA were reviewed by an air quality advisory subcommittee, special consultants, EPA officials, and 17 other Federal agencies.

State implementation plans were inadequate or not submitted

After the first criteria guidelines were issued, EPA published guidelines for developing air quality standards and implementation plans. The implementation plans were to contain an emission control strategy, the principal elements of which were to include (1) legally enforceable emissions standards, (2) procedures describing actions to take during air pollution episodes,[1] (3) provisions for surveying air quality and source emissions, and (4) provisions for reviewing new sources of pollution.

As of December 31, 1970, when the Clean Air Amendments of 1970 were passed, 31 plans were due from 15 States and the District of Columbia, but only 21 had been submitted. (Plans from the other 35 States were due later.) Some plans had been submitted as early as May 1970, but none had been approved by EPA. EPA evaluated 20 State implementation plans and in November 1970 identified 3 major types of deficiencies which ocurred in about 75 percent of the plans submitted:

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[1]Pollutant concentrations reaching levels which would imminently and substantially endanger health.

--Inadequate emergency episode plans.
--Inadequate control regulations.
--Inadequate description of resources.

Overall EPA identified 14 kinds of deficiencies in the 20 plans, and each plan had an average of 5.

It was not until August 1971 that EPA approved, even in part, the implementation plan of any State.

An EPA official explained that EPA's approach was to provide general guidance to the States in preparing the plans and have the States use their initiative in developing the specifics. He said that EPA later realized that this approach was too idealistic. He explained that EPA had initiated a workship program to assist the States in identifying the matters that should be included in their implementation plans and later provided guidelines that not only identified the matters to be included in the plans, but also explained the method by which EPA would evaluate them. The same official stated that, before the 1970 act, EPA had no power to demand specific items in the State plans and had to negotiate with the States on each item that it wanted the States to include.

State officials explained that the preparation of implementation plans was delayed because (1) Federal requirements kept changing, (2) the States were uncertain as to the requirements for an acceptable plan, and (3) the States lacked adequate resources.

ENFORCEMENT UNDER THE CLEAN AIR AMENDMENTS OF 1970

The Clean Air Amendments of 1970 enacted on December 31, 1970, extended, but somewhat modified, the regional concept of the 1967 act. The 1970 act required the Administrator of EPA to designate all air quality regions within 90 days after enactment, and as of March 31, 1971, 247 regions had been established.

The 1970 act also required the States to submit new or revised implementation plans but delayed implementation of the regional concept by extending the deadlines from 7 to 12 months for certain States. The act has allowed the States

until 1977 to achieve the primary air quality standards in their plans. The States have submitted implementation plans to EPA as required.

We believe that the 1970 act deals adequately with many of the enforcement problems that had been encountered. It has given more specific instruction and authority to both Federal and State control agencies by providing for the establishment of

--national ambient air quality standards,

--specific dates for achieving ambient air quality standards,

--specific dates for submitting and approving State implementation plans,

--standards of performance for new stationary sources, and

--national emission standards for hazardous pollutants.

As of November 1972 EPA's principal accomplishments under the act had been to (1) publish national ambient air quality standards for six classes of pollutants, (2) issue guidelines and assist States in preparing implementation plans to achieve air quality standards, (3) promulgate standards for five types of air pollution from new stationary sources, and (4) propose emission standards for three hazardous pollutants.

Enforcement action in Birmingham

In addition to the above, the Federal Government has initiated one direct enforcement action--in Birmingham, Alabama--since enactment of the Clean Air Amendments of 1970.

On November 14 and 15, 1971, the normal emissions of particulate matter from various sources in Birmingham began to accumlate and did not dissipate because of poor atmospheric "mixing" (inversion). On November 15, the National Weather Service announced that adverse meteorological conditions in the area were likely to produce stagnant air and high pollution levels.

On the morning of November 16 the local department of health issued an alert that ambient air pollution levels were exceeding the local standards for particulates. It later issued an air pollution warning that the air quality had not improved during the day.

The department of health deliverd notices to 23 industrial plants in Birmingham requesting that they voluntarily reduce their particulate emissions until the atmospheric conditions improved. On November 17, 9 of the 23 industries reported that they were reducing particulate emissions by 60 percent or more, and 8 reported reductions of 20 to 60 percent.

On November 17, EPA's Emergency Operations Control Center decided to go to Birmingham to take action in the matter. State and county officials cooperated fully.

Under the emergency powers of the Clean Air Act, as amended (42 U.S.C. 1857 h-1), EPA filed a complaint with the district court and, on November 18, 1971, asked for and was granted a temporary restraining order against the 23 plants. The order required the plants to cease discharging particulate matter into the air. By November 19 the crisis had ended, and at EPA's request the court dismissed the complaint and dissolved the restraining order.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

In the past, both Federal and State governments generally relied on polluters' voluntary compliance with air pollution control laws and regulations and seemed reluctant to use the enforcement tools available.

Factors which contributed to limited State enforcement of air pollution laws and regulations included the lack of complete emissions inventories of sources of air pollution, inadequate regulations, insufficient resources, and inadequate surveillance over air polluters.

Federal enforcement under the conference procedures proved time-consuming and cumbersome. One court case initiated under those procedures took many years to resolve.

No enforcement actions were taken under the procedures established by the Air Quality Act of 1967. EPA incurred delays in designating air quality control regions and in issuing information on air quality criteria and pollution control techniques to the States. The delays were due, at least in part, to the limited number of staff assigned to these tasks. In addition, some States did not submit plans to implement the regional program to EPA as required, and plans that were submitted contained deficiencies that precluded EPA from approving them.

Since the enactment of the Clean Air Amendments of 1970, which extended and somewhat modified the regional concept of the 1967 act, both the Federal and State governments have improved their air pollution control programs. As required by the act, air quality regions have been established for the Nation and the States have submitted implementation plans to EPA. The States have taken or plan to take action to correct many of the factors which had contributed to limited enforcement.

Although adopting plans is an important step forward in controlling air pollution, the States still need to fully implement the plans and to take vigorous enforcement action when polluters do not comply with requirements, and the

Federal Government should take enforcement action when the States fail to act.

RECOMMENDATIONS TO THE ADMINISTRATOR OF EPA

Because many polluters do not voluntarily comply with air pollution control laws and regulations, we recommend that the Administrator of EPA (1) closely monitor State implementation of plans to determine whether the States are taking adequate enforcement action against polluters not complying with the plans and (2) take appropriate enforcement action when the States fail to act.

AGENCY AND STATE COMMENTS

In January 1973 drafts of this report were submitted to EPA and the air pollution control agencies of the seven States included in our review.

EPA stated that:

> "For the most part, the report discusses enforcement actions by EPA's predecessor agencies and the states under the legislation that preceded the Clean Air Amendments of 1970. The air pollution abatement programs have evolved under previous legislation primarily in the local areas, with the State and Federal programs taking broader views. With the passage of the Clean Air Amendments of 1970 and the formation of EPA, the emphasis has changed from individualized programs for specific problems, to the development of national standards. The implementation of the standards has begun and major enforcement actions are beginning. Progress in pollution abatement was made throughout this evolution, much without enforcement actions. By discounting the improvements made through negotiations, your report presents the evolution in a way that implies that no progress has been made."

Our review was concerned with all Federal enforcement actions that have been taken against stationary sources of pollution since 1963 when such actions were first authorized. Most enforcement actions have been taken under the 1963 law; one action has been taken under the 1970 act. We agree that progress has been made in abating air pollution and that

negotiation has contributed to that progress. We believe, however, that greater progress could have been made if Federal, State, and local agencies had more effectively enforced air pollution control laws and regulations when negotiation failed to achieve compliance. For example, negotiation frequently resulted in polluters' compliance dates being extended rather than enforced.

EPA agreed, in general, that the States had not effectively enforced air pollution control laws and regulations and stated that, in many States, much enforcement was done by local agencies. EPA stated also that local government actions, especially in major urban centers, should be recognized. (See app. I.)

The comments of the seven agencies were evaluated and appropriately considered in the report. Six of the seven State air pollution control agencies agreed, in general, with our findings. The State of Florida Department of Pollution Control stated that relying on administrative orders and discussions rather than court action to obtain polluters' compliance did not constitute reliance on voluntary compliance by polluters. Florida, however, was having difficulty obtaining prompt compliance from polluters.

CHAPTER 5

SCOPE OF REVIEW

Our review was concerned with the effectiveness of Federal and State air pollution control enforcement activities in abating emissions from stationary sources of pollution.

We reviewed the enforcement efforts of EPA at its headquarters in Washington, D.C., and the Bureau of Stationary Source Control, Durham, North Carolina, and at EPA regional offices in Boston, Atlanta, Philadelphia, Chicago, and New York.

We also reviewed the enforcement activities of the State agencies responsible for air pollution control in Florida, Georgia, Indiana, Massachusetts, New Jersey, North Carolina, and West Virginia; and at eight local agencies in the seven States. We held discussions with representatives from various industries and EPA, State, and local officials, and we examined pertinent legislation, records, and files.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

13 FEB 1973

Mr. Edward A. Densmore
Assistant Director
Resources and Economic Development Division
General Accounting Office
Crystal Mall Building #2, Room 509
Arlington, Virginia 20460

Dear Mr. Densmore:

We have reviewed your draft report to the Congress, "Assessment of Federal and State Air Pollution Control Enforcement Efforts."

For the most part, the report discusses enforcement actions by EPA's predecessor agencies and the states under the legislation that preceeded the Clean Air Amendments of 1970. The air pollution abatement programs have evolved under previous legislation primarily in the local areas, with the State and Federal programs taking broader views. With the passage of the Clean Air Amendments of 1970 and the formation of EPA, the emphasis has changed from individualized programs for specific problems, to the development of national standards. The implementation of the standards has begun and major enforcement actions are beginning. Progress in pollution abatement was made throughout this evolution, much without enforcement actions. By discounting the improvements made through negotiations, your report presents the evolution in a way that implies that no progress has been made.

Until recently, local government agencies did virtually all of the enforcement work in the air pollution field. State governments have become involved, but even now, in many states, a large majority of the enforcement work is done by local agencies. For additional perspective in the report, the actions of local governments, especially in major urban centers, should be recognized. Cities such as Chicago, Detroit, St. Louis, New York, Philadelphia, Pittsburgh, Los Angeles, San Francisco, Baltimore, Cincinnati, Louisville, and Milwaukee have had active and productive programs.

Our detailed comments are attached. We appreciated the opportunity to review your draft report.

Sincerely yours,

Thomas E. Carroll
Assistant Administrator
for Planning and Management

Enclosure

[GAO NOTE: The detailed comments were evaluated and appropriately considered in the report.]

APPENDIX II

DEVELOPMENT OF STATE ENFORCEMENT PROGRAMS DISCUSSED IN THIS REPORT

Although the seven States have had some air pollution control legislation for many years, the fight against air pollution began only within the last few years. Before 1970 State enforcement efforts were directed primarily against open burning and black smoke emissions. The following summarizes the development of enforcement programs for the seven States.

Florida

Florida's air pollution control program was established in 1955 under the State Board of Health. In 1967, the State transferred the program to the Florida Air and Water Pollution Control Commission and authorized fines of up to $1,000 for each air pollution offense. The commission, however, had neither staff nor direct enforcement authority. In 1969 the State established a Department of Air and Water Pollution Control with direct enforcement authority and staff to carry out an enforcement program.

Georgia

Georgia's program began in 1964 when the State legislature passed the State's first air quality control law. The law authorized the Georgia Department of Public Health and its county boards of health to conduct research and studies to determine the factors responsible for air pollution and their effect on health and safety. The Georgia Air Quality Control Board and three local control agencies administer the program.

Before March 1971, the State was primarily concerned with (1) organizing and staffing its air pollution control program, (2) adopting rules and regulations, (3) establishing emission standards, and (4) identifying air pollution sources. By March 1971 the State had developed ambient air quality standards for five air pollutants but had not developed a formal plan for implementing the standards. Subsequently, a sixth ambient air quality standard was submitted to EPA for approval.

Indiana

Air pollution matters were the responsibility of the Board of Health until January 1963 when the Indiana Air Pollution Control Law became effective. The purpose of the law was to maintain the purity of the State's air resources to protect health and welfare and, at the same time, maintain maximum employment and full industrial development. The law made the Air Pollution Control Board responsible for adopting public rules and regulations. The first regulations were promulgated by the board in December 1968. Since its establishment the board has been involved primarily in answering citizen complaints and seeking voluntary abatement of emissions by polluters.

Massachusetts

Air pollution control started as early as 1869 when air pollution, insofar as it was identifiable as a public health hazard or nuisance, was controlled by the State Board of Health. In 1910 the State legislature established a smoke district for the city of Boston and vicinity and provided for regulating smoke density, assessing penalties for violations, and establishing an inspection staff for enforcement. In 1930 a smoke-inspection division was established under the State Department of Public Utilities. In 1960 the State established the Metropolitan Air Pollution Control District to replace the Boston smoke district and authorized the State Department of Public Health to (1) adopt rules and regulations to prevent air pollution within the district, (2) order any person to stop violations of its rules and regulations, and (3) assess penalties for violating the orders.

In August 1969 the State adopted new, more restrictive regulations for the district and in July and September of 1970 made them applicable to other newly established air pollution control districts.

New Jersey

New Jersey's first statute on air pollution control was enacted in 1954, and in 1956, regulations for controlling open burning were incorporated into the New Jersey Air Pollution Control Code. By 1961, the State had adopted

regulations to control smoke density and fly ash emissions. Since 1961 New Jersey has amended the 1954 statute several times and adopted new regulations to provide for additional controls over air pollutants.

North Carolina

In 1959, the North Carolina State Board of Health noted that in 72 of the State's 100 counties, air pollution was a nuisance or inconvenience. The board (1) identified air pollution damage to health, property, vegetation, or animal life in 30 counties, (2) concluded that existing laws were not adequate for control, and (3) recommended that a State air pollution control program be established.

The State's Air Pollution Control Division was not established, however, until 1968. In March 1970 the State adopted regulations (1) prescribing air quality standards for sulfur dioxide and suspended particulates, (2) preventing and controlling open burning, and (3) setting standards for visible emissions. Since its inception the agency has directed enforcement activities to control open burning and black smoke emissions.

West Virginia

West Virginia's State commission for air pollution control was established by legislation in 1961, and in 1964 the State's first emissions regulation became effective.

West Virginia has attacked air pollution on an industry-by-industry basis and has made some progress in controlling pollution from industrial sources, such as coal preparation plants, hot-mix asphalt plants, and certain manufacturing industries.

In 1967 West Virginia amended its 1961 legislation and strengthened the air pollution control requirements, provided for penalties of $1,000 a day for violations, and authorized the Director of the State commission to issue cease-and-desist orders. Further amendments were passed in 1971 which gave the board authority to require potential polluters to obtain construction permits and to submit emission data.

APPENDIX III

PRINCIPAL OFFICIALS OF THE ENVIRONMENTAL PROTECTION AGENCY RESPONSIBLE FOR ADMINISTRATION OF ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
ADMINISTRATOR:		
Robert W. Fri (acting)	Apr. 1973	Present
William D. Ruckelshaus	Dec. 1970	Apr. 1973
ASSISTANT ADMINISTRATOR FOR ENFORCEMENT AND GENERAL COUNSEL:		
John R. Quarles	Feb. 1971	Present
ASSISTANT ADMINISTRATOR FOR AIR AND WATER PROGRAMS: (note a)		
Robert L. Sansom	June 1972	Present
Robert L. Sansom (acting)	Apr. 1972	June 1972
Donald Mosiman	May 1971	Apr. 1972
DEPUTY ASSISTANT ADMINISTRATOR FOR AIR PROGRAMS: (note b)		
Dr. John T. Middleton	Mar. 1971	Dec. 1972

[a]This was Assistant Administrator for Media Programs before October 1971.

[b]This position no longer exists in EPA's organizational structure.

☆ U.S.GOVERNMENT PRINTING OFFICE: 1973--729-237/1013 REGION NO. 3-1